

**Claim listing**

Please enter the amendments to the following claim listing, which replaces all prior claim listings.

1 - 81 (Canceled)

82. (Currently Amended) A polymer-bead assembly comprising: a substantially planar assembly of beads wherein member beads are encoded with a label differently, said planar assembly being embedded in a polymer, wherein differently encoded beads have different biomolecules displayed on their surfaces and the encoding indicates the type of biomolecule displayed on particular beads and the type of analyte said biomolecule is capable of binding with.

83. (Currently Amended) The polymer-bead assembly of claim 82 wherein the encoding is with color distinguishes particular beads.

84. (Previously presented) The polymer-bead assembly of claim 82 wherein the polymer is hydrophilic.

85. (Previously presented) The polymer-bead assembly of claim 82, wherein the biomolecules are ligands or receptors.

86. (Previously presented) The polymer-bead assembly of claim 85, wherein ligands are peptides, proteins, nucleic acids (including DNA and RNA) or oligonucleotides.

87. (Previously presented) The polymer-bead assembly of claim 82, wherein the planar assembly is arranged on a substrate.

88. (Previously presented) The polymer-bead assembly of claim 87, wherein the substrate is a silicon chip.

89. (Previously presented) The polymer-bead ~~composite-film~~ assembly of claim 82, wherein the beads have an average diameter of 0.5 um to 100 um.

90. (Previously presented) The polymer-bead ~~composite-film~~ assembly of claim 82, wherein the polymer comprises cross-linked alkylacrylamide or hydroxyalkylacrylate hydrogel.

91. (Previously presented) The polymer-bead ~~composite-film~~ assembly of claim 82, wherein the beads include magnetic beads.